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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/424,035 11/17/99 ECKEL

T MO-5383/LEA3

BAYER CORPORATION
100 BAYER ROAD
PITTSBURGH PA 15205-9741

IM22/1227

EXAMINER

HOKE, V

ART UNIT	PAPER NUMBER
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1714

6

DATE MAILED: 12/27/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/424,035

Applicant(s)

ECKEL ET AL

Examiner
VERONICA P. HOKE

Group Art Unit
1714



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-10, 13, and 14 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-10, 13, and 14 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☒ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4 & 5

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Part of Paper No. 6

Office Action Summary

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The preliminary amendment of November 17, 1999 has been entered.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent 5674924), Kakegawa et al or EPO 731140 (Lee et al) taken with 1) Fuhr et al (065), Wittman et al or Podszun et al and 2) Serini et al

Each of the primary references (Kakegawa et al - col.5, line 39 and line 40 and col. 8, lines 20 and 45-46; Lee et al (EPO - pages 1-4); and Lee et al (US Patent - cols. 1-5, line 40) disclose the combination of a monophosphate and an oligomeric polyphosphate with Teflon as a flame retardant system for PC which has been further compounded with a styrenic resin such as SAN or its presence in the form of a grafted styrenic resin on a rubber base such as a diene rubber or mixtures of the two. **Applicants flame retardant system for PC contains the same materials for PC which has the grafted rubber resin per se based on data that the composition's weld line strength is compromised by the additional presence of SAN.** See comparative

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compositions 2 and 3 in Tables 1 and 2 of the specification. Applicants claims also stipulate that 1) TEFLON has a particle size diameter of 0.05 to 1000 μm , a density of 1.2 to 2.3 g/cm^3 and a fluorine content of 65 -76 wt. % (claim 1) and 2) that the rubber's glass transition temperature is less than -10°C . These are well known characteristics of phosphate flame retardant - and- rubber impacted PC formulations.

As to the purposeful exclusion of SAN in order to improve weld line strength in the primary references' compositions it has long been recognized according to Lee et al (US patent at col.2) that a SAN copolymer's presence in addition to the grafted rubber component produces agglomeration which in turn incurs poor property characteristics such as color striping in the molded PC article because the grafted rubber's homogeneous distribution is detrimentally affected. Additionally, Serini et al recognized (col.17, lines 17-18, last table vis-a-vis exs. a and b vs. m through t) that the styrene resin is less inclined to reduce weld line strength if the styrenic resin is a grafted styrenic rubber instead of a blend of the non grafted styrene resin and if the rubber phase has a particle size within the range of 0.01 to 20 μm , irrespective of the methylated or non methylated nature of the aromatic portions of the PC resin's molecules.

Therefore it is well known that diluting the rubber content incurs diminution of weld line strength (col.13, lines 6 et seq.). Dilution of the rubber content occurs as well when increased quantities of SAN are present. Hence the comparative examples are not evidence of unexpected results.

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Regarding the grafted rubber component's glass transition temperature rating of less than -10°C , this is typical of phosphate flame retardant PC formulations having an impact modifier according to Podszun et al (col.8, lines 25-27) and Wittman et al (col.5, lines 62-63). The Teflon component's particle size, density and fluorine content are typically in the range of 0.05 to 1000 μm , 1.2-2.3 g/cm^3 and 65- 76 wt. %, respectively, as related by Fuhr (col.1, lines 33-45), Lee (US Patent- col.5, lines 12-30) and Fuhr (col.8, lines 44-56).

Therefore nothing unobvious is deemed established by choosing a rubber with the designated glass transition temperature rating minimum of -10°C as the impact modifier and Teflon with the designated particle size, fluorine content and density ratings as the antidrip modifier in the primary references' multi phosphate- flame retardant PC/ Styrenic resin grafted rubber blend having sufficient flameproofing and weld line strength properties.

Veronica P. Hoke

vph

December 19, 2000

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